

Appl. No. 10/700,857
Docket: CL2207USNA

REMARKS

Claim Rejections 35 USC § 103

Claims 1-8, 10-18, 20-26 and 28-29 are rejected under 35 USC § 103(a) as unpatentable over Soto et al. (US 5,008,325) or Taub (US 3,404,131).

Applicants respectfully maintain that Soto et al. does not teach the stable aqueous poly(urea/urethane) dispersion of the instant invention nor otherwise make the same obvious in view of a combination with Taub. The Applicants wish to point out that the claimed "urethane" dispersion is based on the use of a polyether homo- and/or copolymer, or a polyester, as a glycol, and an aromatic polyisocyanate, but does not require the use of a typical chain extending agent such as a polyamine, a curing agent or a crosslinking agent. By contrast, Soto et al. clearly point to a need for chain extension of their polymer (see column 10, lines 11-65). In general, Soto et al. prefer water and polyamine compounds for chain extension. Preferred polyamines are disclosed in this aforementioned passage in column 10. The instant invention distinguishes over Soto et al. through the absence of a need for common polyamine chain extenders, such as ethylene diamine, and against the use of such polyamines. It is precisely this omission of a polyamine chain extender from the reaction to form the poly(urea/urethane) which enables the production of a polymer containing less than about 2 mole percent (claim 1, lines 12-14) or less than about 1 mole percent (claim 7) of urea units as described by the formula $-R - N(R^2) - C(O) - N(R^2) - R^1 -$; wherein R is an aromatic hydrocarbon radical, R^1 is an aliphatic hydrocarbon radical, and R^2 is H or an amide group that is described by the formula $-C(O) - N(R^2) - R -$.

Provided in Taub (US 3,404,131) is a clear teaching of the use of chain extenders by preparing chain extended polyether-urethane-ureas from the isocyanate terminated polyether-urethanes and diamines. This teaching differs from the Applicants' invention wherein no chain extending agent such as a polyamine is needed nor desirable.

Applicants respectfully submit that in light of the foregoing remarks the rejection of claims 1-8, 10-18, 20-26 and 28-29 based on Soto et al. or Taub is overcome and should be withdrawn.

Claims 9, 19 and 27-29 are rejected under 35 USC § 103(a) as unpatentable over Soto et al. (US 5,008,325) or Taub (US 3,404,131) as applied to claims 1, 10 and 20 and further in view of Bialke et al. (US 6,794,475).

Applicants respectfully maintain that Soto et al. does not teach the stable aqueous poly(urea/urethane) dispersion of the instant invention nor otherwise make the same obvious in view of a combination with Taub. Applicants wish to point out that the claimed "urethane"

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dispersion is based on the use of a polyether homo- and/or copolymer, or a polyester, as a glycol, and an aromatic polyisocyanate, but does not require the use of a typical chain extending agent such as a polyamine, a curing agent or a crosslinking agent. Polyurethane film that does not require a chain extender, e.g., a polyamine, in the stable aqueous poly(urea/urethane) dispersion is not taught nor is it suggested by the applied references.

Bialke et al. teaches poly(urethane-urea) dispersions or "PUD" in column 8, line 42 and bridging to column 9 from line 1 to line 15. Therein the aforementioned passages Bialke et al. teach PUD chain branched with polyamines, e.g., 1,2 diaminoethane, 1,6 diaminoheptane and others. For this reason, the teachings of Bialke et al. do not include films or glove applications as claimed. Please see the list of chain extenders such as diols and diamines at column 8, lines 56 through column 9 at line 15.

Applicants respectfully submit that in light of the foregoing remarks, the rejection of claims 9, 19 and 27-29 based on Soto et al. or Taub as applied to claims 1, 10 and 20 and further in view of Bialke et al, is overcome and should be withdrawn.

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CONCLUSION

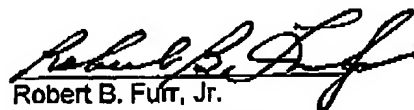
This response is meant to be a complete response to each and every rejection and objection set forth by the Examiner. For at least the reasons stated above, all claims are now in condition for allowance.

In the event any outstanding issues remain, Applicants would appreciate the courtesy of a telephone call to Applicants' undersigned representative to resolve such issues in an expeditious manner.

Applicants hereby authorize the Commissioner to deduct the fees associated with this Response and Petition to Revive Following Unintentional Abandonment and any other fees necessary to maintain this application from Deposit Account 50-3223 (INVISTA). In the event there is a variance between the amount to be charged and the amount found to be due, the Commissioner is further authorized to credit or deduct the difference, as appropriate, from the undersigned's deposit account as above.

Dated: January 5, 2006

Respectfully submitted,



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